Biography of Russell D. Dupuis

Dr. Russell D. Dupuis is a Professor in the School of Electrical and Computer Engineering at the Georgia Institute of Technology. Professor Dupuis holds the titles of the Steve W. Chaddick Endowed Chair in Electro-Optics and Georgia Research Alliance Eminent Scholar. At Georgia Tech, Dr. Dupuis is involved in the microsystems and optics and photonics groups. Previously, he held the position of Professor and Judson S. Swearingen Regents Chair in Engineering in the Department of Electrical and Computer Engineering at the University of Texas at Austin.

Before joining academia, Dr. Dupuis was in industry positions at AT&T Bell Laboratories, Rockwell International, and Texas Instruments. At Rockwell International, he achieved a number of firsts, including using Metalorganic Chemical Vapor Deposition (MOCVD) to grow high-quality semiconductor thin films and devices, including the first high-performance MOCVD-grown solar cells, lasers, and LEDs. He also grew high quality AlGaAs-GaAs conventional and quantum-well heterostructures by MOCVD, and for the first time, demonstrated room-temperature continuous-wave operation of AlGaAs-GaAs quantum-well injection lasers and established that such lasers are reliable enough for practical use.

During his tenure at AT&T Bell Laboratories, Dr. Dupuis further demonstrated the reliability of MOCVD AlGaAs-GaAs lasers and was the first to grow InP-InGaAs lasers and InP-InGaAs avalanche photodetectors by atmospheric pressure MOCVD. He was promoted to Bell Labs Distinguished Member of Technical Staff in 1986. When he joined UT-Austin in 1989, he established the Advanced Materials and Devices Group to study novel MOCVD processes and to grow device-quality heterostructure devices using MOCVD. He is continuing this research at the Georgia Institute of Technology. His most recent work involves the MOCVD growth of heteroepitaxial InAlGaN films and devices, the growth of InAlGaAsP-InP and GaAsSbN-GaAs lasers, InAlGaP-GaAs vertical-cavity surface-emitting lasers, and InGaAs-InP heterojunction field-effect transistors. In addition, he is exploring the III-V "native oxide" materials. His technical specialties include semiconductor materials and devices, epitaxial growth by MOCVD, and heterojunction structures in III-V compound semiconductors.

Dr. Dupuis has received many awards and distinctions throughout his career. He is a member of the National Academy of Engineering and is a Fellow of the Institute of Electrical and Electronics Engineers, the American Association for the Advancement of Science, and the Optical Society of America. He is a licensed Professional Engineer in the State of Texas. Among his many awards, he recently received the John Bardeen Award for 2004 from The Minerals, Metals, and Materials Society. An author of more than 260 technical papers in refereed journals and a sought-after lecturer, Dr. Dupuis has held numerous leadership positions within professional societies and with various conferences and workshops associated with the microsystems and optics and photonics areas.

Dr. Dupuis earned all of his academic degrees from the University of Illinois at Urbana-Champaign. He graduated with his B.S.E.E. with Highest Honors-Bronze Tablet in 1970, his M.S.E.E. in 1971, and his Ph.D.E.E. in 1973. His graduate research was directed by Professor Nick Holonyak, Jr. His alma mater has distinguished him with the University of Illinois at Urbana-Champaign Alumni Loyalty Award and the Distinguished Alumnus Award from the College of Engineering and the Department of Electrical and Computer Engineering.

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